

# FLIPPED CLASSROOM: AN INNOVATIVE STRATEGY FOR EFFECTIVE TEACHING-LEARNING PROCESS

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## **Abstracts**

*This study investigated flipped Classrooms as an innovative strategy for the teaching-learning process. The concept of flipped classroom as a student-centered and activities-based educational learning model that aims at replacing the traditional mode of teaching and learning and why it is necessary to adopt such into our teaching methodology, the importance, and effective ways of implementing flipped classroom was justified. It was evident that flipped classroom is more of activities-based learning; it is both students and instructor friendly where students were actively involved in the lesson. Conclusively, the Flipped classroom is a modernized method of instruction that gives room for active participation of both learner and teacher in teaching and learning process to make learning to be more practical and aid retention of the students. Based on the above it was therefore recommended that flipped classrooms should be introduced into schools to enable the student to tap from the technological advancement around the world to learn and be better informed; it will also afford the students ample opportunities to compete with their counterparts in other parts of the world; instructor should be provided with adequate and required training for them to perform according to the norms and standard.*

*Keywords: flipped classroom; innovative; strategy; integration; process; instructions.*

## **Introduction**

The technological mobile environment in recent times has completely changed the world, which implies that things can no longer be done the way they used to be, including the modes and methods of educational Instructions in our schools. Many related modern methods of learning instructions have been introduced into the education sector by different scholars in the past, such as collaborative learning, spaced learning, self-learning, gamification, virtual learning, crossover learning, etc. The most noticeable era of the flipped classroom could be traced to the two (2) Chemistry teachers at Woodland Park High School. Jonathon Bergmann and Aaron Sams in 2007 searched for a better way to provide lecture materials for students who missed classes, they tried screen recording software for their PowerPoint presentation slides into YouTube and shared to the students, hence there is a paradigm shift from the traditional method of teaching and learning, where students became more active in the class and getting more prepared for classes unlike ever before. They became more participating and enthusiastic rather than being passive, students' interactions were at their peak and healthy and constructive discussions were the order of the day.

Flipped classroom enables the student to compete favorably with their counterparts both home and abroad, make learning more interesting and practical, a more sophisticated, productive, rewarding, and interesting model that gives room for better understanding, active participation, and high levels of retention. Mull (2012) defines flipped classroom as a model that provides students prepare themselves for the lesson by watching videos, listening to podcasts, and reading articles. Bishop and Verleger (2013) define it as a student-centered learning method consisting of two parts with interactive learning activities during the lesson and individual teaching bases directly on the computer out of the lesson. To Milman (2012) an approach aims at the efficiency of lessons by transferring knowledge to students via videos and vodcasts as well as by discussions, group works, and applications during course. Toto and Nguyen (2009) opine that flipped classroom is an approach that increases active learning activities and gives an opportunity for students to use their knowledge in class with the guidance of the teacher.

AlJaser (2017) describes flipped classroom as a student-centered educational learning model that aims at replacing the traditional lecture by active cooperative tasks using the internet and computer technology to transmit a video lecture to be watched at home and then students discuss it through some pair activities. The effectiveness of using flipped classroom strategy in academic achievement and self-efficacy of college students is a productive tool that makes learning, teaching, and lecturing more exciting and interesting. Sullivan (2009) asserts that the interaction of learners with these situations (Flipped Classroom) influences their ability to develop a meaningful understanding of new concepts and skills and to transfer skills to other relevant situations. Providing students with opportunities to allow the context of a situation to guide their learning more closely, simulate how people learn in real-world

situations. This will avail the students the opportunities to cope with situations within and outside their immediate environment and in turn making them more reliable and accountable for their actions. Basal (2015) posits that flipped classroom technology approach encourages collaboration among learners, overcomes the limitation of their study in the classroom, and increases the learners' participation.

Bergmann & Sams, (2012) posits flipped classrooms as the main approach to applying technologies for learning and instruction. McLaughlin, (2014) sees flipped classroom (FC) as a model of teaching where content is delivered online for students to access in their own time and space, thus allowing face-to-face interactions to be active sessions grounded in authentic disciplinary practices. It is a student-centered arrangement where each student is responsible for coming to class with a basic understanding of the content so that they can fully participate and engage actively in class discussion. Villanueva (2016) insists that using a flipped classroom technology approach motivates the individual need of the learners. Unakorn & Klongkratoke (2015) Flipped classroom technology allows learners to have more efficient management for the time in the classroom and better achievement in learning and provides them with more opportunities to communicate with their classmates and instructor. There was no communication barrier between the students and the instructor since the students have some basic rudiment concerning the topic to be discussed, the class become so interesting for all. Berrett's (2012) exploration points out that for universities, the flipped classroom offers a way to provide access more efficiently to in-demand lecture classes: it takes advantage of improved technologies to ensure student learning outcomes are met, even when resources are scarce due to a grimmer economic environment. Mazur (2009) flipped classroom denotes that student gain first exposure to new material outside of class, usually via reading or lecture videos, and then use class time to do the harder work of assimilating that knowledge, perhaps through problem-solving, discussion, or debates.

#### **RATIONALE/BENEFITS BEHIND FLIPPED CLASSROOMS**

Jonathan & Aaron (2012) suggested the following reasons for flipped classrooms i.e why teachers should consider flipping their classrooms

- a. It speaks the language of today's students: It is obvious that we are in the jet age and the languages of yesteryears are becoming barbaric, so to carry the students along you must speak the language they understand.
- b. It helps busy students: Since students can learn based on their strength and capability busy students has more opportunity to do more.
- c. Struggling students were helped by the arrangement of the flipped classroom to participate and contribute to topics of discussion in the class thereby helping them to cope with their counterparts.
- d. It helps students of all abilities to excel: All students were actively involved in classroom discussion this avail all the students the opportunity to perform excellently well because of the slogan "what I do I remember"
- e. It allows students to pause and rewind their teacher: Flipped classroom gives room for students to ask a question at every point in time for better understanding of the concept, the recorded charts, videos, or slides can be repeated or replayed from time to time so as to yield favorable results.
- f. Flipping increases student-teacher interaction: The interaction is so cordial without any fear of intimidation and harassment.
- g. It enabled the teachers to know their students better: Students are well known by the teacher because they are all actively involved in the lesson and there is room for proper identification because it embraces the differentiation method.
- h. Student-student interaction increases: It brings about cordial and mutual relationships among the students. They see themselves as peers rather than competitors.
- i. Flipping allows for real differentiation: Students learn at their own pace which is more respected by the teacher.
- j. It changes classroom management: The classroom becomes activities-based environment, unlike the traditional method.
- k. Changes the mode of rapport with parents: Students are more mature in thinking and reasoning due to the adoption of flipped classrooms so thereby more constructive in their dealing with people outside the school, including their parents.
- l. It educates parents: It orientates and synthesis parents about the recent happenings within and outside our immediate environment
- m. Classrooms are made transparent: The class becomes more transparent since topics are thrown into the open and discussions are done in the presence of every student with free will to speak their minds.

**Others include**

Flipped classroom is time saving because the introductory aspect of the topics take place at home and the students are fully prepared for the lesson. The model is associated with many potential improvements: more time to interact and clarify material, more time to explore concepts deeply, and more time for additional learning objectives or practice with active learning (Boucher, Robertson, Wainner & Sanders, 2013).

The interaction in the classroom is more efficient and healthier due to the fact that the students are familiar with the topic before the face-to-face interaction in the class

Students are less frustrated and overburden with overloaded homework and assignment instead they listen to the lecture at home and solve the problem in the class

It provides the students the opportunities to explore in-depth/in-class activities that focus on the higher level of cognition unlike the traditional method of teaching. There is more time for extended classroom discussions and exercises, helping students reach deeper understandings of concepts (Kellogg, 2009).

It exposes the students to gain first exposure of the topic even before the class interaction

### **How to Implement a Flipped Classroom**

Lage, et al. (2000) suggested that planning for a flipped classroom requires reflecting on resources available and using them to best suit the unique situation, depending also on possible input and collaboration of a teaching community.

Jeff (2014) Outline a 6-step guide for proper implementation of the flipped classroom, these include.

#### **Plan**

Figure out which lesson you want to flip. Outline the key learning outcomes and a lesson plan. This implies that there must be a proper guideline as to the way and manner of the presentation. It must be in accordance with the standard and comply with the educational objectives.

#### **Record**

Instead of teaching this lesson in person, make a video. A screencast works. Make sure it contains all the key elements you'd mention in the classroom. The video must be relevant, concise, and self-explanatory to avoid unnecessary rancor and misrepresentation in the class.

#### **Share**

Send the video to your students. Make it engaging and clear. Explain that the video's content will be fully discussed in class. This must be done to avoid any mistake, make sure you are careful enough to send what you intend to at a particular point of the time.

#### **Change**

Now that your students have viewed your lesson, they're prepared to go more in-depth than ever before.

#### **Group**

An effective way to discuss the topic is to separate into groups where students are given a task to perform. Write a poem, a play, make a video, etc. the students are to be properly guided during the presentation of what they know or learned otherwise there will be classroom management lapses on the part of the instructor.

#### **Regroup**

Get the class back together to share the individual group's work with everyone. Ask questions, dive deeper than ever before.

Josh Corbat (2013) identifies six (6) steps to a flipped classroom

Decide which technology you will use.

Decide which video service you will use to publish your videos to your students.

Make your videos!

Make your students accountable for watching your videos.

Keep it up!

Bask in the glow of stress-free teaching.

The above implies that there is a need for effective planning, which means the teaching personnel are prepared adequately before the class to have smooth and productive teaching and learning in accordance with stated objectives.

Pearson's School Achievement Services, (2013) emphasized that there are four pillars that teachers must incorporate into their practice to engage with flipped learning while using FLIP as an acronym:

**F: Flexible Environment:** Flexible spaces were created by educators in which students choose when and where they learn. They often physically rearrange their learning space to accommodate a lesson or unit and support either group work or independent study. Furthermore, educators who flip their classes are flexible in their expectations of student timelines for learning and in their assessments of student learning.

**L: Learning Culture:** Pearson emphasizes that the traditional teacher-centered model, the teacher is the primary source of information. By contrast, the Flipped Learning model deliberately shifts instruction to a learner-centered approach, wherein class time is dedicated to exploring topics in greater depth and creating rich learning opportunities. As a result, students are actively involved in knowledge construction as they participate in and evaluate their learning in a manner that is personally meaningful. This is in line with what McLaughlin, (2014) tagged as a model of teaching where content is delivered online for students to access in their own time and space, thus allowing face-to-face interactions to be active sessions grounded in authentic disciplinary practices. Flipped Learning Educators continually think about how they can use the Flipped Learning model to help students develop conceptual understanding, as well as procedural fluency. They determine what they need to teach and what materials students should explore on their own. Educators use Intentional Content to maximize classroom time to adopt methods of student-centered, active learning strategies, depending on grade level and subject matter.

**I: Intentional Content:** Flipped educators continually think about how they can use the Flipped Learning model to help students to gain conceptual understanding, as well as procedural fluency. They evaluate what they need to teach and what materials students should explore on their own. Educators use Intentional Content to maximize classroom time to adopt various methods of instruction such as active learning strategies, peer instruction, problem-based learning, or mastery or Socratic methods, depending on grade level and subject matter.

**P: Professional Educator:** Professional Educator in a Flipped Classroom during class time, continually observe their students, providing them with feedback relevant to that moment, and assessing their work unlike traditional one.

Professional Educators are reflective in their practice, connect with each other to improve their instruction, accept constructive criticism, and tolerate controlled chaos in their classrooms. While Professional Educators take on less visibly prominent roles in a flipped classroom, they remain the essential component that enables Flipped Learning to occur (Flipped Learning Network FLN, 2014)

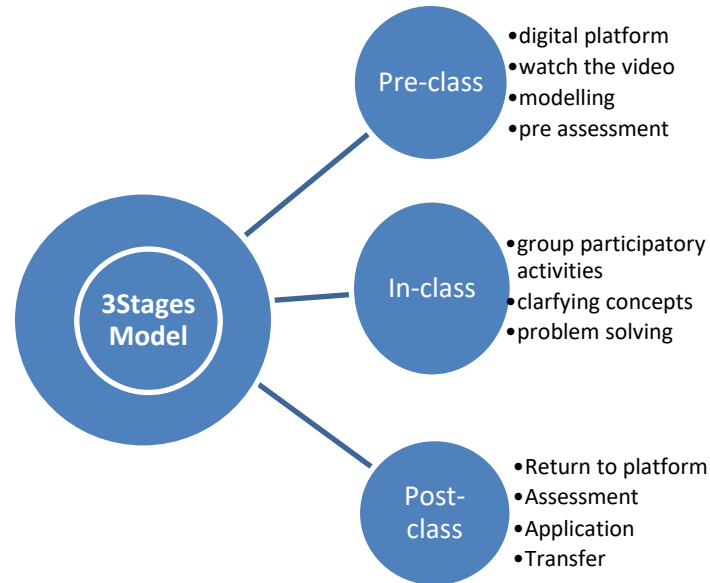
Estes et al (2014) identifies three (3) major stages model of flipped Classroom which include

The Pre-Class

The in-class

The post-class

These could be diagrammatically represented as thus:



The above implies that there will be adequate preparations at the pre-class stage for the flipped classroom which will enable the instructor to gather all needed materials and technological know-how for the effective delivery of the subject matter. This was supported by Educause, (2012) that by creating lectures and in-class exercises or materials, instructors may need to learn new technology skills to create video lectures. Hence, the instructor needs to acquire adequate knowledge in other to handle flipped classrooms effectively.

The second stage is all about the students' activities, flipped classroom is activities-based learning where students will be fully engaged in solving problems, clarifying issues, and manipulates relevant gadgets under the thorough supervision of the instructors.

The last and the final stage of the model, according to Estes et al (2014) deals with the application of the subject matter into the real-life situation with intention of solving economic and social-political challenges in our immediate environment and beyond.

### **Implication of Flipped Classroom to National Development**

Flipped classroom tends to offer wider opportunities to the individual student, schools, and the larger community in the following areas.

#### **Producing Employable Graduates**

Flipped classroom give an insight to students to be able to respond to real life situation since the method exposed the students to the reality of life and they can think independently and solve most of National challenges. Sullivan (2009) posits that the interaction of learners with these situations (Flipped Classroom) influences their ability to develop a meaningful understanding of new concepts and skills and to transfer skills to other relevant situations. Providing students with opportunities to allow the context of a situation to guide their learning more closely, simulates how people learn in real-world situations.

#### **Improvement in National Development**

A well-grounded individual, exposed to this innovative strategy will be able to contribute meaningfully to his/her country. "You can only give what you have", the matured mind of this younger generation and the level of their disposition will make them become good thinkers who will think beyond tomorrow and forecast/project a better way of accomplishing tasks.

#### **Patriotism**

This will make the students more loyal and patriotic to their country, seeing their country before any other thing, the knowledge acquired under this situation gives them the clue to see and do things differently and become more responsive and responsible to their fatherland. There is no doubt that the traditional means of teaching and learning are no longer invoke in the present-day situation.

### **Time Management syndrome**

Flipped classroom affords the students to adopt a good time management system which eventually forms part of their habits that will manifest into how to maintain such in their respective field of human endeavor in the larger society. This will assist the Nation when people begin to see time as an important factor in human existence. Unakorn & Klongkratoke (2015) asserts that flipped classroom technology allows learners to have more efficient management for the time in the classroom and better achievement in learning and provides them with more opportunities to communicate with their classmate and instructor.

### **Challenges of Using Flipped Classroom**

**Parent Socio-Economic Background:** Most parents were from a low socio-economic background and such students may not have access to computers and other technological instruments after the class activities making it impossible for them to actively engage themselves in personal development at home and pose more burden and hardship on the part of the parents while trying to cater for their wards. Nielsen, (2012) asserts that technology needed for viewing or interacting with lecture material may not be available in every student's home. This in turn brings about inequity among students for proper actualization of flipped classroom gadgets. Ash, (2012) also added that students completing homework will have different levels of help available to them from parents who may or may not have the time or knowledge to be a support for their child.

**Mental Ability of the Students:** students do not have the same level of mental ability to grasp things at once and some with a high level of mental ability use the avenue as an added advantage of the gadgets to do undesirable behavior contrary to what is meant for. However, Kellogg, (2009) suggests that there is more time for extended classroom discussions and exercises, helping students with deeper understandings of concepts

**Lack of Expatriate:** the teaching personnel in charge may not be well-grounded enough to put the students through and thereby ineffectively handling the apparatus which will pose more constraints on the use of flipped classrooms to actualize the predetermined objectives. Educause, (2012) opined that by creating lectures and in-class exercises or materials, instructors may need to learn new technology skills to create video lectures. Hence, the instructor needs to acquire adequate knowledge in other to handle flipped classrooms effectively. On the other hand, refers could be the case.

**Independent Learning:** Flipped classroom gives room for students to work at their own pace and students with a low level of sense of direction and no supportive efforts from the parent will likely find it difficult to cope with flipped classrooms and negatively affect the effectiveness. Ash, (2012) suggests that most students will have the opportunity to work through material more quickly or take time reviewing information at a slower pace. Some of these students may find it difficult to manage their schedule of work in line with limited time.

**Power Supply:** This is the major challenge of flipped classrooms because most instruments and gadgets were electronically operated and in this part of the world electricity is "Gold" you cannot ascertain when there will be a supply of power. This makes the flipped classroom ineffective and unproductive compared to its original plan.

### **Conclusion**

It is obvious that the flipped classroom is gaining more popularity most especially in this era of a pandemic where physical contact in the classroom activities are constraint and the usual means of instructions in our schools has changed from traditional methods to a more pragmatic and advanced method that will give room for root learning.

The flipped classroom is more student-centered unlike the old teachers-centered method of instruction. Students stand to gain more because they are fully engaged in every activity surrounding the teaching-learning process and it adopts the system of doing it yourself syndrome.

### **Recommendation**

Based on the above, it was therefore recommended that flipped classrooms should be introduced to enable the students to tap from the technological advancement around the world to learn and be better informed. It will expose the students and give them ample opportunities to compete with their counterparts in other parts of the world.

Instructors should be provided with adequate and required training for them to perform according to the norms and standards. Training and retraining of the instructor are paramount to enables them to be updated



Provision of adequate power supply because most technologies of nowadays are operated electronically and for the effective and efficient utilization of these gadgets require a constant power supply. Availability of computer system, interactive whiteboard, and other technological apparatus needed for the efficient implementation of the flipped classroom.

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